## **Supporting Dataset**

## Magnesium transporter 1 (MAGT1) deficiency causes selective defects in N-linked glycosylation and expression of immuneresponse genes

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Running title: MAGT1 deficiency causes selective N-linked glycosylation defect

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Supporting Dataset 1. Mass spectrometry analysis of samples from HEK 293T WT cells and MAGT1 CRISPR KO cells immunoprecipitated with an anti-MAGT1 antibody.

Supporting Dataset 2. Differentially expressed genes in CD8<sup>+</sup> T cells from XMEN patients compared to healthy controls before activation (day 0), or after activation (day 3, day 12).

Supporting Dataset 3. Functional enrichment of differentially expressed genes in CD8<sup>+</sup> T cells from XMEN patients compared to healthy controls before activation (day 0).

Supporting Dataset 4. Downstream Effects Analysis results from Ingenuity Pathway Analysis for differentially expressed genes in CD8<sup>+</sup> T cells from XMEN patients compared to healthy controls.

Supporting Dataset 5. Target genes downstream of regulators in the CD28 causal network consistent with inhibition of CD28, based on differentially expressed genes in CD8<sup>+</sup> T cells from XMEN patients compared to healthy controls before activation (day 0).